DIASONIC

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PDVR-1000

MY SECURITY MASTER

Pocket mini Digital Video Recorder

USER MANUAL

Please read all the instructions completely before use and save this manual for future reference.

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Preface

Thank you for purchasing PDVR-1000 manufactured by Diasonic Technology Co., Ltd. It is important to read and understand all instructions before use. After use of the manual, put the manual in a place you can reach easily. If you misplace this manual, you may ask it to Diasonic Technology Co., Ltd. or a distributor for downloading the copy.

Copyrights & legal issue

- DIASONIC Technology has all copyrights of this user manual. Reproduction, distribution, and commercial use of a part of or the entire user manual without prior consent of DIASONIC Technology are strictly prohibited by laws.
- All information contained in this manual has been carefully studied and written, but it is subject to change without prior notice for functional and performance improvement. DIASONIC Technology will not take any responsibility for issues arising due to differences between the product and information contained in the user manual.
- Diasonic Technology Co., Ltd. does not take any responsibility for any issue rose from use of any file(s), software or contents under patent or copyright.
- Reproduction of files is prohibited for other than personal purposes by law.
- User must be in charge of all responsibilities for recording and storing something including all activities in use of the device. Therefore, use must be careful if the activity with the device is illegal.
- Diasonic Technology does not take any responsible for any damage caused by the use of this device or damage claim made by a third party.
- Diasonic Technology does not take any responsible for the loss of data caused by other actions than repair services by Diasonic Technology.
- Diasonic does not take any responsibility for the data stored or recorded in the device, so user must be careful to manage & keep the date.

Safety Notes

- Do not store the device in any place with following conditions:
  - High temperature (45℃ or higher)
  - Exposure to the direct sun rays or a heating device
  - Inside the car with closed windows (especially, in the summer)
  - Humid place such as the bathroom
- When removing dust, use soft cloth in dry. Do not use organic solvents such as thinner or benzene or wet cloth.
- Do not place a debit card or a bus pass near the speakers. The magnetic interference may occur, which will damage the card.
- Do not place the device near a magnet. The device may not be workable properly.
- Do not repair, disassemble, or remodel the device.
- Do not use the product in a place where use of electronic devices is prohibited.
- Do not operate or set up this device while driving. If it is required to change set up, please do it after pulling over the car or before driving.
- Do not heat up or short the main body or the battery.
- When using an auxiliary device, leave a gap between the auxiliary device and the main device.
- Incorrect use of the product by the user or a third party or static electricity or electric shock loaded on the product may cause loss of or change in the data saved in the product during repair services or replacement of the battery.
- Keep the device out of reach of children.

1. PDVR-1000

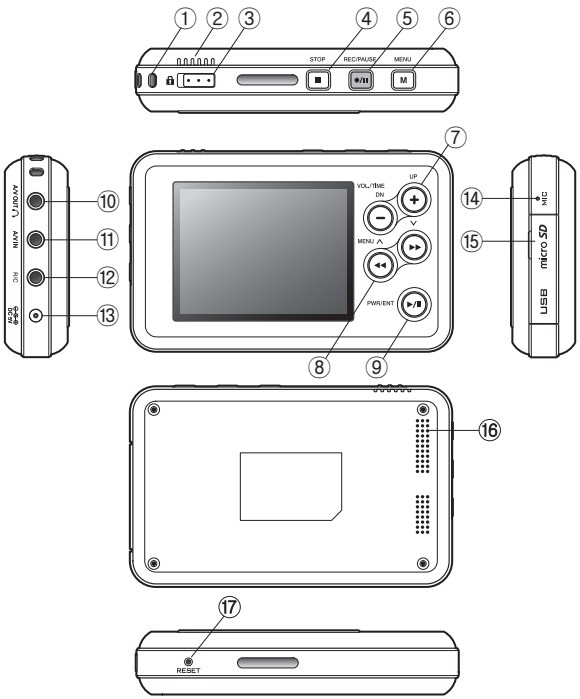
- Law enforcement grade pocket mini Digital video recorder.
- 2.4" color LCD(320x240) with LCD off/on setup function while recording.
- Stamping Time & Date for future evidence.
- The most advanced video recording format(H.264) with efficiency compression & resolution of recording file.(720x480/30fps/Max/NTSC.)
- Longer Recording Time in better video quality than MPEG4 format.
- External micro SD card slot compatible with SDHC(16GB) for expanding the memory capacity.
- Recording by Motion Activation Detection.
- WAV Voice recording format for clear sound quality.
- Endless Recoding with overwriting.
- Changing storage while recording if a current memory is full. **(Selectable)**
- Various Recording Options.
  - Rec. Video+Audio/Video or Voice only.
  - Rec. fps(5/10/15/20/25/30fps for NTSC & 5/10/15/20/25fps for PAL) & quality(High/Std./Low) selectable.
  - Timer Recording.
- Snap Photo Shot and slide show.
- NTSC or PAL selectable in the recorder.(AV-in/out)
- Securely recording file backup in low battery power.
- Built-in mic. & Speaker.(mono)
- Wired Remote Controller.(Stop/Record/Pause/Hold)
- Built-in rechargeable battery.(2hrs 30mins lasting in rec./2000mAH)
- Additional battery pack for expanding a recording or a playback time.(Option)
- Convenience carrying case for carrying PDVR-1000 & additional battery pack together.(Option)
- AC/DC adaptor.(DC5V 2A/Max.)
- USB 2.0 PC interface without any drive installation.
- Light Weight(98.5g) and mini size.(95 x 59.6 x 18.3(mm))

2. Camera

- 1/3" Color Sony CCD pinhole camera.
- NTSC(768x492)/PAL(768x582)
- 450 TV Line.
- 1/60-1/110,000sec(Auto) of Electronic Shutter.
- 0.1Lux.(Min. Illumination)
- 90 degree of Angle of View.
- Auto White Balance.
- 5V 200mA.(Max.)
- 4 different button & screw adaptor.
- Separated wired microphone.(-32dB)
- Size: 29.4x27.8x18.2(mm)/Including button adaptor height.
- Weight: 22.5g/Including ext. mic & cable

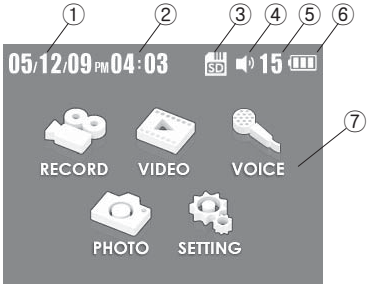
02 The Name of Each Part

1. Main Unit & Button



① Neck Strap Holder
② Air Vent
③ Hold Key
④ Stop/ESC
⑤ Rec./Pause
⑥ Menu
⑦ Volume up & down
⑧ RW & FF or Menu Up & Down
⑨ Play/Pause/Enter/ Power On & Off
⑩ A/V-Out
⑪ A/V-In
⑫ Remote Controller
⑬ DC Jack
⑭ Built-in Microphone
⑮ micro SD card slot/ USB Jack
⑯ Built-in Speaker
⑰ Reset

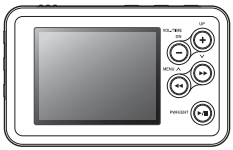
2. Display & Icon



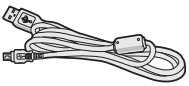
① Date
② Time
③ Current Selected Memory Storage
④ Speaker On/Off or earphone
⑤ Volume Level
⑥ Battery Status Indicator
⑦ Current selected menu

3. Package

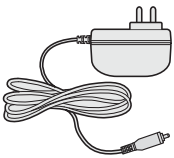
1) PDVR-1000 with Basic Accessories



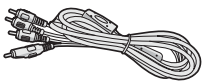
PDVR-1000



USB Cable

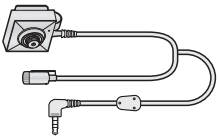


AC/DC Adaptor

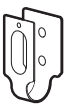


AV Out Cable

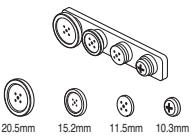
Hand Strap



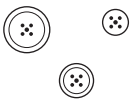
Pinhole Camera



Bracket for installment on the wall

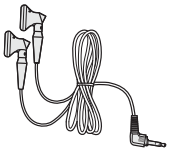


Adaptors for Camera lens

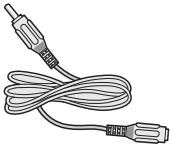


Normal Buttons and screw

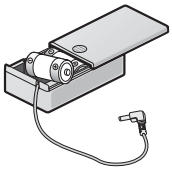
2) Optional Accessories



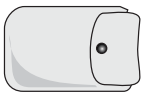
Earphone



Camera Extension cable (5m/10m)

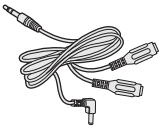


Battery Pack



Carrying Case

Remote Controller



AV-in Cable

☞ The design or shape of accessory on the above is just for reference. It would be different than real one.

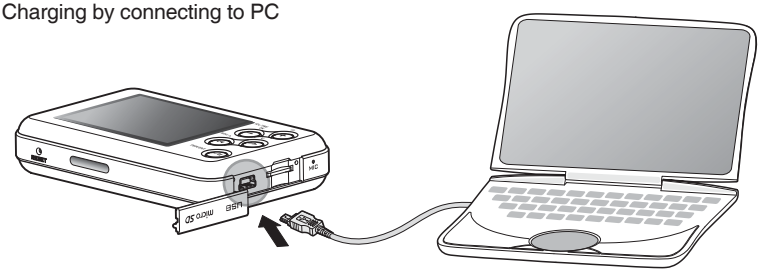
03 Basic Preparation before operation

1. Checking the battery status

1) Charging the battery

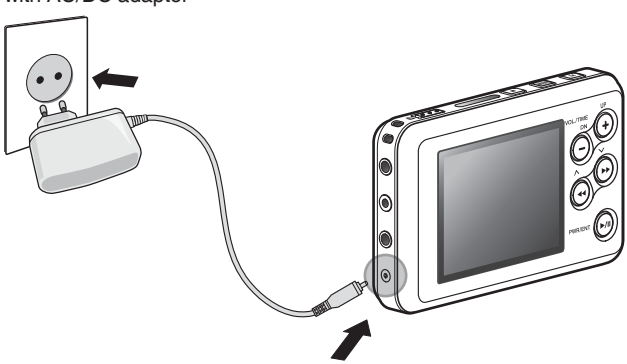
User can charge PDVR-1000 by connecting the USB cable to a computer or by using the AC Adaptor.

① Charging by connecting to PC



☞ It takes approx.20hrs for charging the battery by USB cable.

② Charging with AC/DC adaptor



2) Battery Charging Time & Operating Time

Charging Time	Continuous play time	Continuous recording time
Approx. 5hrs in Power On	Approx. 4hrs	Approx. 2hrs 30mins
Approx. 3hrs 30mins in Power Off		

☞ When plugging or unplugging the AC/DC adaptor, turning off the unit is strongly recommended. The maker strongly recommends using a supplied AC/DC adaptor, but if it is necessary that another AC/DC adaptor is purchased separately at a shop, please check its electric specification is in accordance with PDVR-1000's specification.

3) Battery Remaining Status

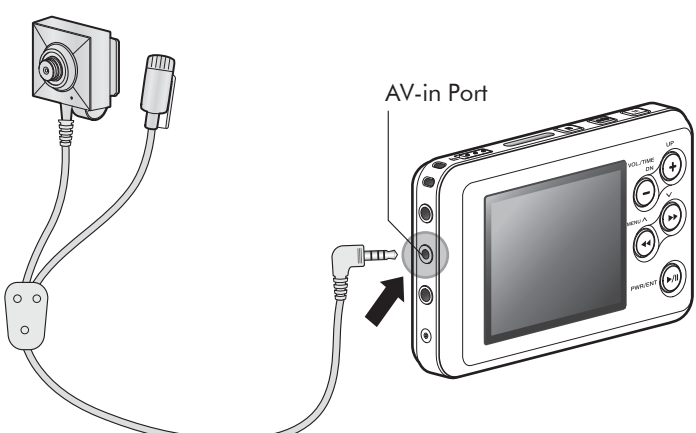
	Full Charge		Some Power Consumed
	Power almost drained		No Power

2. Connecting Camera

1) Connecting Camera

A camera must be connected to AV-in port before starting a recording. If a camera is not connected or in loose, error message pop-up

on the LCD will be blinking when trying to record. The maker guarantees only the supplied camera for obtaining the best quality and working proper, so if user would like to use another maker's camera, it must be checked if it works properly before recording.



☞ When connecting or disconnecting the camera please turn off the unit.

2) Checking PAL or NTSL

① AV-in

A camera type(PAL or NTSC) shall be selected correctly on the menu.

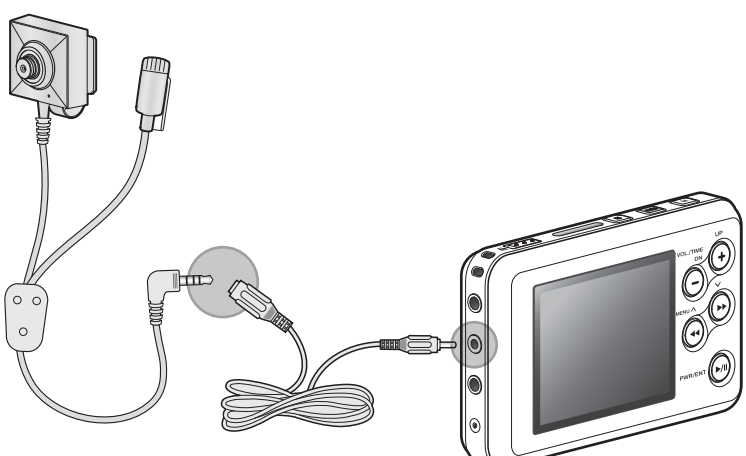
Setting -> Display Setup -> Video Format -> NTSC or PAL

② AV-out

PAL or NTSL is only supportable system for the Video-out, so for monitoring on another display device such as LCD or TV while recording, a right type of the camera system shall be connected and selected on the device.

3) Extension Camera Cable(Optional Item)

If it is required to extend the camera cable, the extension camera cable on the optional accessory may be affordable.



☞ When using the camera extension cable, there will be some decline of the recorded quality in voice recording, but video recording. Please keep in mind that the longer the cable is, the worse quality is in voice recording.

3. Select a memory type

Before starting a recording, the memory type to store a recorded file(s) shall be selected. Basically PDVR-1000 has a built-in memory, but user may select external memory for storing a recorded file(s) other than the built-in memory.

1) Memory Type and capacity

① Internal memory: 1GB, 2GB, 4GB or 8GB

☞ According to the model, the memory capacity on board may be different.
Memory capacity can be checked on the menu. (Setting->System Setup->Memory Information)

② Expandable Memory(External memory): micro SD(up to 16GB compatible)

☞ micro SD including SDHC is compatible, but it might not work properly according to a brand of maker. So, make sure if the SD card is compatible properly with PDVR-1000 before recording. micro SD Card made by Sandisk is strongly recommended.

☞ micro SD card is not included in the package, so user needs to buy separately.

2) Select Memory Type

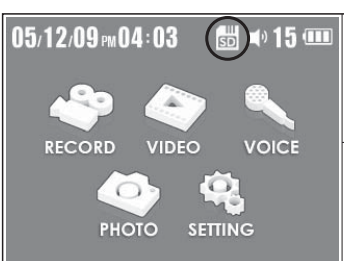
Main Menu -> Go to "Setting" -> Memory Setup -> Storage Select -> Internal or External

☞ If SD card is selected without SD card being inserted, error pop-up ( ) is shown up.

☞ With pressing "Menu" button for 2-3seconds, memory type is changed "Internal memory" to "External memory" or "External memory" to "Internal memory".

3) Confirmation of the Memory Type

User can check what type of memory is selected on the LCD.



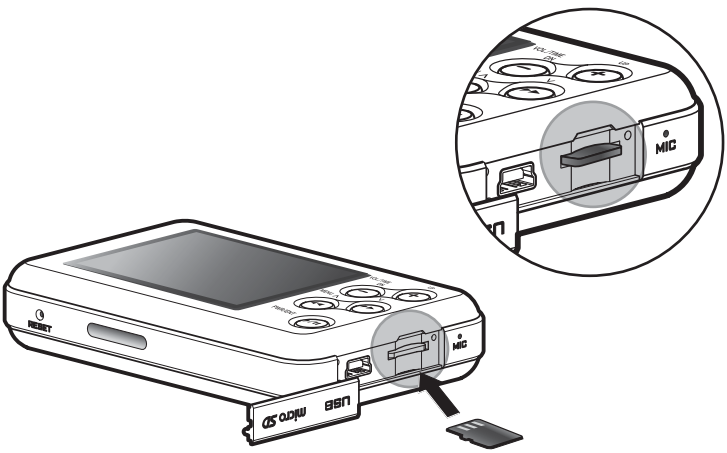
	Internal Memory
SD	External memory(SD card)

4) Insert micro SD card

① Insert micro SD card to the slot on the device.

② Make sure its direction to insert to micro SD card slot as the below diagram.

③ Hold micro SD card's face up and insert it straightly to the slot until micro SD card stopping with a click.



☞ Do not extract the micro SD card out of the slot while recording if the storage to save a file is selected to SD card.

☞ If inserting micro SD card in wrong way or inclined angle, the contact part of micro SD card could be damaged or jammed inside.

☞ If micro SD card may not be inserted correctly, it may not be readable.

5) Eject micro SD Card

① Push micro SD Card inward with finger quickly & smoothly, and it will be ejected partially.

② Hold the micro SD Card straight and pull it out.

6) Format

If micro SD card is brand-new(unformatted) or used one in the other devices, please format it on this device.

☞ Before formatting, make sure the stored file(s) in micro SD card is not necessary anymore. Otherwise, back up the file(s) to another storage or PC.

4. Set up Time & Date

All values of the device are set up at the factory defaults if turning on first time after purchasing. So it is necessary to set up time and date at current value for stamping current time and date to the recorded file and other functions like Timer Recording.

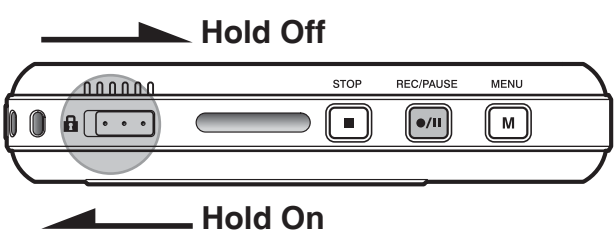
1) Set up time & Date

Main Menu -> Setting -> System Setup -> Time Set -> Date Set(YYYY-MM-DD) -> Time Set(HH:MM) -> Date Display(Y/M/D or M/D/Y) -> Time Display (12H or 24H)

Moving to the next or previous option	Changing the value up or down	Confirming a setup	ESC

5. Hold

Hold key works to prevent a mistake from unexpected operation, so this shall be checked if it is on before starting a record.

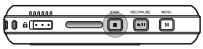


☞ If Hold is on, "lock icon" is displayed on the top of the LCD and

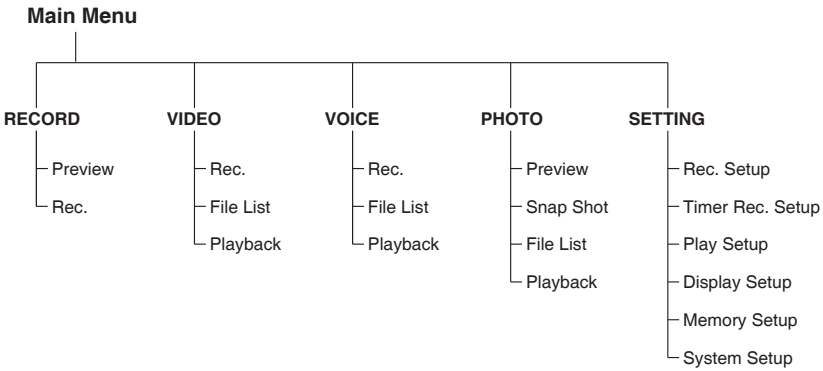
is in pop-up whenever pressing any button.

04 Button Operation

☞ **Long key: Hold a key for 2-3 seconds / Short Key: Hold a key for 1 second**

	Long Key	Short Key
	- Power On/Off	- Play/Pause in Playing a file - Enter/Select in Menu & file list
	- AV-out(TV or LCD)↔ LCD of PDVR-1000 (Only applicable on Main Menu)	- Stop playing or recording - Escape out of a current menu
		- Start/Pause
	- LCD off while recoding or preview - Int. Memory↔ Ext. memory in no operation (Only applicable in Main Menu)	- Show up a submenu in each mode (RECORD/ VIDEO/VOICE/PHOTO) - Go up to Main menu directly at a submenu in SETTING
	- Vol. up or down continuously - Value up or down continuously	- Vol. up or down in playing a file - Value up or down in Time Setup
	- Move to the next or back to the previous option continuously - Move to upper or lower directory continuously	- Move to the next or back to the previous option - Move to upper or lower directory - FF or REW in playing

☞ Press any button for returning to the LCD On while LCD off in security recording.



- **RECORD**
  - Preview
    - Rec. Time: Off/10/20/30/60min.
    - Mic Sensitivity: Low/Middle/High
  - Rec.
    - Rec. Time: Display a value set at preview & Rec. Setup in SETTING
    - Mic Sensitivity: High/Middle/Low
- **VIDEO**
  - Rec.
    - Rec. Time: Display a value set at preview & Rec. Setup in SETTING
    - Mic Sensitivity: High/Middle/Low
  - File List
    - File Play
    - File Delete: No/One/All
    - File Protect: No/One/All
    - File Information: File Name/File Size/File Protection
  - Playback
    - Video Repeat: No/One/All One/All
    - Display Out: LCD/TV
- **VOICE**
  - Rec.
    - Rec. Time: Display a value set at preview & Rec. Setup in SETTING
    - Mic Sensitivity: High/Middle/Low
  - File List
    - File Play
    - File Delete: No/One/All
    - File Protect: No/One/All
    - File Information: File Name/File Size/File Protection
  - Playback
    - Voice Repeat: No/One/All One/All
- **PHOTO**
  - Preview
    - Snap Shot Time: Off/10/20/30/60min.
  - Snap Shot
  - File List
    - File Play
    - File Delete: No/One/All
    - File Protect: No/One/All
    - File Information: File Name/File Size/File Protection
  - Playback
    - Slide-Show: No/Yes
    - Slide-Show Time: 1/3/5/7/10sec.

05 Structure of Menu Tree

- **SETTING**
  - Rec. Setup
    - Input Source:Video+Audio/Video
    - Video Quality: High/Standard/Low
    - Resolution: 720x480/352x240/176x120(NTSC)
720x576/352x288/176x144(PAL)
    - Frame Rate: 5/10/15/20/25/30fps(NTSC)
5/10/15/20/25fps(PAL)
    - Motion Detection: On/Off
    - Time Stamp: On/Off
    - Rec.Time: Off/10/20/30/60min.
    - Endless Rec.: No/Yes
  - Timer Rec. Setup
    - Set: Cancel/Once/Everyday
    - Start
      - YYYY-MM-DD
      - AM/PM HH:MM
    - End
      - YYYY-MM-DD
      - AM/PM HH:MM
  - Play Setup
    - Video Repeat: No/One/All One/All
    - Voice Repeat: No/One/All One/All
    - Photo Thumbnail View: No/Yes
    - Slide Show: No/Yes
    - Slide Show Time: 1/3/5/7/10sec.
  - Display Setup
    - Video Format: NTSC/PAL
    - Display Out: LCD/TV
    - LCD Brightness: 0/1/2/3/4/5/6/7/8/9
    - LCD Backlight: Off/3/5/10/All sec.
  - Memory Setup
    - Storage Select: Internal/External
    - Format: Internal/External
    - Memory Change: No/Yes
    - Memory Information
      - Internal:Total & Remain
      - SD Card:Total & Remain
  - System Setup
    - Speaker Control: On/Off
    - Auto Power Off Time:Off/1/3/5/7/10min.
    - Time Set
      - Date Set: YYYY-MM-DD
      - Time Set: AM/PM HH:MM
      - Date Display: Y/M/D or M/D/Y
      - Time Display: 12H/24H
    - Factory Default Set: No/Yes
    - Firmware Version
    - Battery Pack: On/Off

1. Main Menu

- **RECORD**
  - Previewing before recording.
  - Recording a video input signal from the connected camera.
  - The file recorded in this mode is stored at the "VIDEO".
- **VIDEO**
  - Recording an video input signal from the connected camera.
  - A recorded video file(s) is stored here and played back.
- **VOICE**
  - Recording a voice input signal from a built-in microphone or a microphone on the camera.
  - A recorded audio only file(s) is stored here and played back.
- **PHOTO**
  - Previewing before snap photo.
  - Taking a snap shot.
  - A photo file(s) taken by Snap Shot is stored here and reviewed.
- **SETTING**
  - User can set up setting values.

2. Operation of Each menu

☞ If starting a recording, STOP won't work within 5seconds.

☞ Maximum size of the file to be made in PDVR-1000 is 4GB. So when a file size is reached to 4GB in a recording, it automatically saves the file and then start a new recording with new file index.

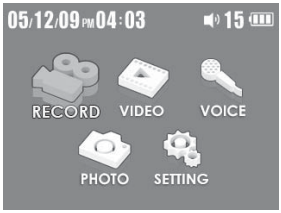
☞ Do not take a SD card out while recording to external memory storage but if it is made, PDVR-1000 automatically powers off. The file was recording just befor taking the SD card won't be displayed on PDVR-1000, but it might be playable on a PC.

☞ Before starting a recording, make sure the battery status. We strongly recommend to record with AC/DC adaptor for long recording.

☞ In case of selecting "Video+Audio" as an Input source in Rec. Setup, audio is not recorded together if 5fps is selected in frame rate. So if it is necessary to record audio together with video at 5fps, set up the frame rate at over 10fps.

1) RECORD

In this mode, user can make a video (Video+Audio or Video Only) and previews what is recorded before starting a recording.



Before starting a recording, user shall select one of recording types (Video+Audio or Video only)

SETTING -> Record Setup -> Input Source -> Video+Audio or Video.

① Preview

User can make sure what is recorded thru preview before starting a recording.

i. Preview

Move to "RECORD" on the main display -> Press ( ) -> Previewing

☞ Letter of "Preview" is displaying on the right of the LCD.

ii. Start a recording after preview

Preview -> -> Start a recording -> Stop the recording by

☞ Letter of "Preview" is changed to "Rec" on the right of the LCD.
If pressing a REC button( ) again while recording, the recording is paused and re-start the recording by pressing the REC button once again.

② Quick Recording without preview

Move to "RECORD" on the main display -> -> Start a recording->
Stop the recording by

☞ If pressing a REC button( ) again while recording, the recording is paused and re-start the recording by pressing the REC button once again.

☞ When a recording is done, it takes time to save a file and are displaying to indicate on the way to save.

③ Set up optional values

While previewing & recording, values of recording time & Microphone sensitivity can be adjustable by pressing "MENU".

● **Previewing**

- Recording Time: Off/10/20/30/60Min.
  ☞ Set up a recording time

- Microphone sensitivity: High/Middle/Low

- **Recording**

  - Recording Time: Display a value set at preview & Rec. Setup in SETTING

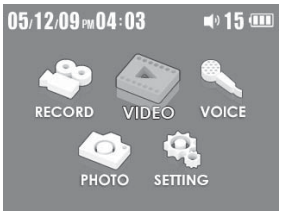
  - Microphone sensitivity: High/Middle/Low

☞ If a camera is not connected to PDVR-1000 or in loose, "No Signal"( ) will be blinking 3 times.

☞ The recorded video file is stored and playable at the "VIDEO" on the main menu.

2) VIDEO

User can make a video(Video+Audio or Video according to the setup) and all recorded file(s) at the modes of "RECORD" and "VIDEO" are stored and playable here.



① Recording a video

Move to "VIDEO" -> Press Rec. button (●/II) -> Recording -> Pause the recording by pressing Rec. button once again -> Re-start the recording by pressing Rec. button once again -> Stop the recording by pressing "Stop" button (■)

☞ When a recording is done, it takes time to save a file and are displaying to indicate on the way to save.

② Check or Playing a recorded file

Move to "VIDEO" -> Enter into a subfolder by pressing (▶/II) -> Select a desired file by ◀◀ & ▶▶ -> Play back the file by pressing (▶/II) -> Pause the playing file by (▶/II) -> Replay the file by pressing it once again -> Stop playing by (■)

③ Set up Optional Value

While operating each function(Recording, Checking a file, Playing a file), user can change a setting value by pressing Menu button(M).

● **Recording**

- Recording Time: Display a value set at preview & Rec. Setup in SETTING
- Microphone sensitivity: High/Middle/Low

● **File List**

- File Play: Play a selected file
- File Delete: No/One/All
- File Protect: No/One/All
- File Information: File Name/File size/File Protection

● **Playing**

- Video Repeat: No/One/All One/All
- Display Out: LCD/TV

④ Playback Speed Control

While playing a file, playback speed can be adjustable with ◀◀ & ▶▶
Playback speed has 2 options, "increasing plackback speed(x1↔x2↔x4↔x8)" and "decreasing playback speed(x1↔x1/2↔1/4↔x1/8)". By pressing ▶/II while playing back, option(Increasing speed↔Decreasing speed) can be switchable.

⑤ The recorded file format

Recording Mode
- AV: Audio+Video - VO: Video Only

AVM20090423 1640-001.mpg

- Year
- Month
- Day
- Time
- File Index
- File Format
- Recording Type
  - M: Normal Rec. - T: Timer Rec. - E: Endless Rec.

Ex: • AVM200904060059-001.mpg
- Recorded in Video+Audio thru normal rec. on 6 April, 2009 at 00:59

• VOM200905011459-002.mpg
- Recorded in Video only thru normal rec. on 1 May, 2009 at 14:59

• AVT200907210152-001.mpg
- Recorded in Video+Audio thru Timer rec. on 21 July, 2009 at 1:52

• AVE200908041801-004.mpg
- Recorded in Video+Audio thru Endless rec. on 21 August, 2009 at 18:01

☞ The file(s) recorded in PDVR-1000 is only playable in PDVR-1000.

⑥ Recoding Time

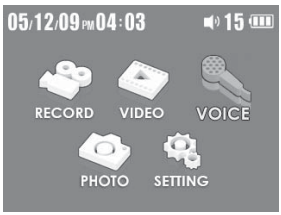
Resolution	Frame Rate	Video Quality	1GB
			Hour
720x480	30fps	High	2h, 20m
		Standard	3h, 20m
		Low	5h
352x240	30fps	High	3h, 50m
		Standard	4h, 50m
		Low	7h
176x120	30fps	High	8h, 50m
		Standard	9h, 50m
		Low	10h, 40m

<< Input Source: Video+Audio & NTSC >>

☞ The Recording time may be different than the table according to several recording conditions such as noise, condition of power supply and activity of a subject for video, etc., so please use the above table only for reference and consider more recording space than you expect based on the table.

3) VOICE

User can make a voice only file thru a built-in microphone or a microphone on the camera as well as storing and playing a recorded voice file in this mode.

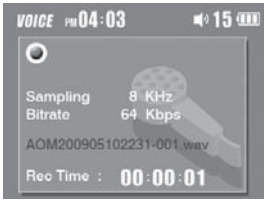


① Recording a voice

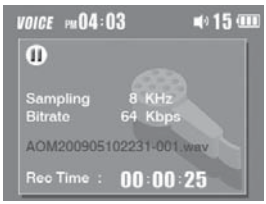
Move to "VOICE" -> Press Rec. button (●/II) -> Recording -> Pause by pressing Rec. button (●/II) once again -> Re-start the recoding by pressing Rec. button (●/II) -> Stop the recording by pressing Stop button (■)

i. LCD Display

Recording



Pause



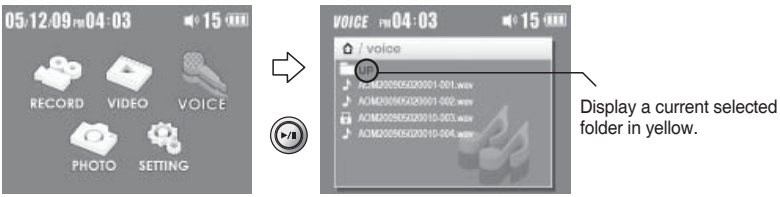
☞ While recording, user can monitor what is being recorded by plugging an earphone in AV-out. If an earphone is plugged in, is displayed on the LCD.

☞ If stopping a recording, file list in voice folder is showed up just after saving a recorded file and the last saved file is indicated in yellow.

② Checking a recorded voice file

Move to "VOICE" -> Enter into a subfolder by pressing (▶/II) -> Listing files

i. Enter into the voice file list



ii. Escape from the voice file list

☞ Just upper directory of the file list shows photo, video and voice folder as the above display, and only voice file stored in each folder can be shown and playable in voice mode when entering into each folder(photo, video & voice).

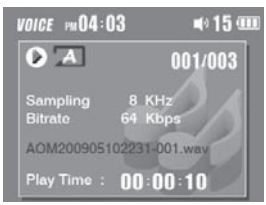
☞ Quick recording can be made by pressing Rec. button( ) at anywhere in the file list.

③ Playing a recorded voice file

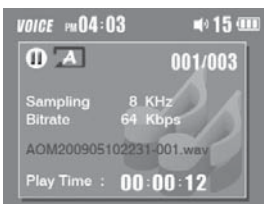
Move to "VOICE" -> Enter into a subfolder by pressing ( ) -> Listing files -> Select a desired file to play by (or) ->Playing the file by ( )

i. LCD Display

Playing

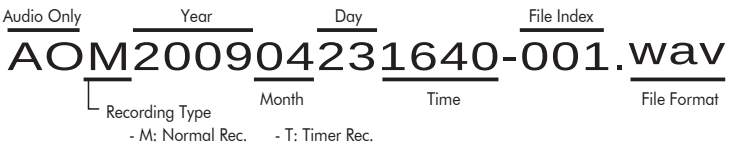


Pausing



☞ The recorded file format: WAV(AOM200905102231-001.wav)
The file(s) recorded in PDVR-1000 is only playable in PDVR-1000.

④ The recorded Voice file format



⑤ Set up optional values

While operating each function(Recording, File list, Play), user can change a setting value by pressing Menu button(M) if necessary.

● **Recording**

- Recording Time: Display a value set at preview & Rec. Setup in SETTING
- Microphone sensitivity: High/Middle/Low

● **File List**

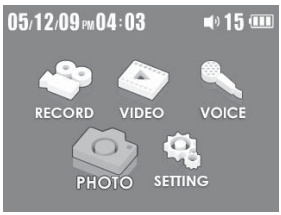
- File Play: Play a selected file
- File Delete: No/One/All
- File Protect: No/One/All
- File Information: File Name/File size/File Protection

● **Playing**

- Video Repeat: No/One/All One/All

4) PHOTO

In this mode, user can take a photo as well as storing and reviewing photos to be taken in this mode.



① Taking a SNAP PHOTO

Move to "PHOTO" -> Press Rec. button (●/II) -> Previewing -> Press Rec. button (●/II) -> Taking a photo

☞ Photo is taken in 320x240 as a default.
☞ While previewing, "Preview" is displaying on the LCD and then "Snap shot" is displaying on the LCD when taking a photo.

② Displaying a photo

Move to "PHOTO" -> Enter into a folder by pressing (▶/II) -> Listing files -> Select a desired file to display by (◀◀ or ▶▶) -> Displaying the file by (▶/II)

☞ Maximum image size to displayable on PDVR-1000 is "1600x1200".
☞ It is different to display a photo according to a display setup as below displays.

SETTING -> Play Setup -> Photo Thumbnail View -> No or Yes

Photo Thumbnail View with "No"

Photo Thumbnail View with "Yes"

③ Set up Optional Values

While operating each function(Preview, File list & Displaying), user can change a setting value by pressing Menu button(M).

● Previewing

- Snap Shot Time: Off/10/20/30/60Sec
  ☞ Set up a recording time
- Taking a photo every setting time from the first shot until pressing STOP.

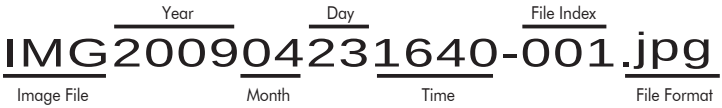
● File List

- File Play
- File Delete: No/One/All
- File Protect: No/One/All
- File Information: File Name/File size/File Protection

● Displaying

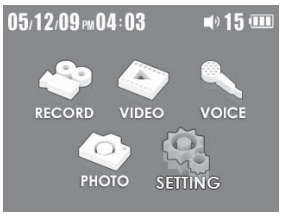
- Slide-Show: No/Yes
- Slide-Show Time: 1/3/5/7/10Sec

④ The image file format

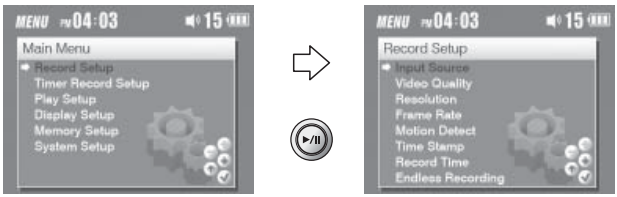


5) SETTING

User can set up most of options & values in this menu and recording a video can be made in this mode, too.



① Record Setup



i. Input Source

Setting up whether recording a video together with a audio or recording a video only. This option should be set up before recording a video.

- Video+Audio: Recording a file with Video & Audio.
- Video: Recording a file with Video only.

ii. Video Quality

- High: If a file is required to be recorded in higher quality, recommend selecting this value, but the file size shall be bigger.
- Standard: It is recommended to record in normal quality.
- Low: If recording time is more important, set it up at this value. Recording time shall be extended by decreasing the file quality.

iii. Resolution

This is a setup for deciding a maximum size of display when making a video file, but user should consider that a file size shall be bigger or smaller according to set up one of these values.

- NTSC: 720x480/352x240/176x120
- PAL: 720x576/352x288/176x144

iv. Frame Rate

This is to set up how many frame is recorded per second with.
The higher value is, the smother motion is but the file size is in opposite.

- NTSC: 5fps/10fps/15fps/20fps/25fps/30fps.
- PAL: 5fps/10fps/15fps/20fps/25fps.

v. Motion Detection

Automatically it starts a recording by detecting a motion but if there is no motion, it pauses a recording.

☞ If the motion detection is made with 720X480, 30frames & high video quality, the frame rate of the recorded file could be decreased to around 20 frame in average (NTSC), so it is helpful to set up one of the values related to quality at lower (Resolution/Frame rate/Video Quality) to increase the frame rate in recording. In addition, it is also helpful to increase the frame rate that LCD Off while recording with 720X480, 30frames & high video quality.

☞ LCD Off: Press [M] for 2-3seonds while previewing or recording. If so, LCD is Off, but previewing or recording keeps on. Press any key to LCD back if necessary.

vi. Time Stamp

If the option is selected, a recording date(YY/MM/DD) and Time(00:00:00) are stamped on the file and shown on the video while playing back. But if a file is recorded in the option off, the file is not displaying a date & time when playing back.

vii. Record Time

It is option to set up for how long it is recorded. If setting up one of these values, it will be off automatically after recording for a set time.

- Off/10/20/30/60Min.

viii. Endless Recording

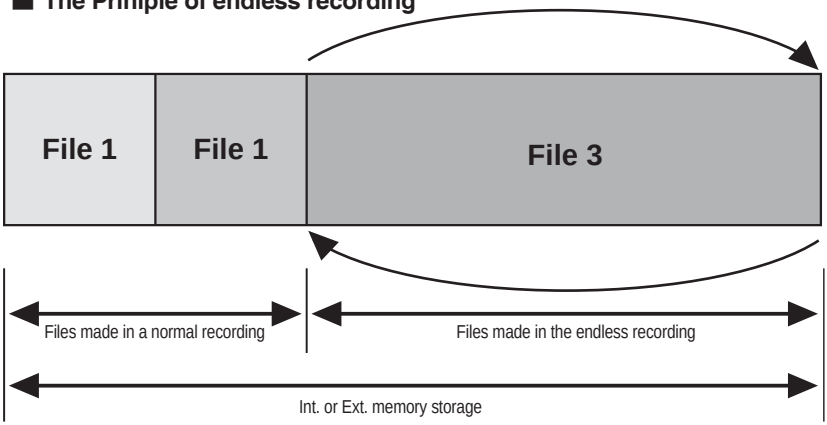
It is a feature to continuously record by going back to the beginning of a recorded file when a memory is full until stop the recording and sequentially more advanced recorded part from the beginning is overwritten by new recording.

☞ To use this function, a minimum memory capacity shall be remained.

720x480	352x240	176x120
50MB	25MB	12MB

☞ If there is any recorded file to keep, backup it to PC or the other memory storage before operating this function.

■ **The Priniple of endless recording**

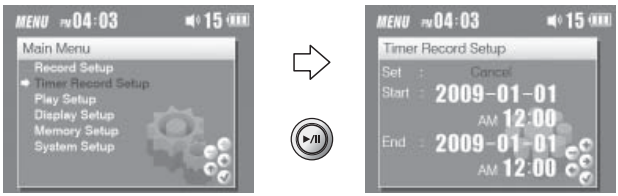


☞ Maximum size of the file to be made in PDVR-1000 is 4GB. So when a file size is reached to 4GB in a recording, automatically save the file and then start a new recording with new file index.

☞ In the endless recording, the function of a "Memory Change" is not applicable, so the endless recording continues to record within the selected memory only(Int. or Ext. storage).

② Timer Record Setup

This is a setup to start and stop a recording automatically on a specific set date & time.



i. Set
- Cancel: Timer Record Off.
- Once: Timer record is operated one time on a set time & date.
- Everyday: Time record is operated every single day on a specific time.

ii. Start: Set up a recoding start date & time. In case of setting up the set at "Every day", only start time is settable.

iii. End: Set up a recoding end date & time. In case of setting up the set at "Every day", only end time is settable.

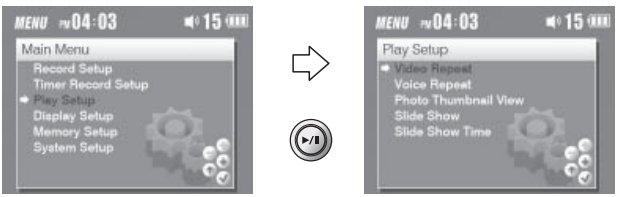
☞ If there is any wrong value in setup, an error message pops up as below.

- Start or End time value in wrong

- Start or End date value in wrong

☞ When all setups are completed successfully, "clock icon" ( ) is displayed on the LCD.
☞ The "clock icon" ( ) is blinking for 1min. before starting a schedule and then start a recording with "Timer Rec." on the LCD. The recorded file is automatically saved in VIDEO folder at a end time and then the display turns to the folder list with indicating the last recorded file in yellow.

③ Play Setup



i. Video Repeat: Set up a playback style of a video file.

- No: Play back a selected file one time and then stop.
- One: Play back a selected file repeatedly until stop.(Video Only applicable)
- All one: Play back all of files in a selected folder one time and then stop.
- All: Play back all of files in a selected folder repeatedly until stop.

ii. Voice Repeat: Set up a playback style of a voice file.

- No: Play back a selected file one time and then stop.
- One: Play back a selected file repeatedly until stop.
- All one: Play back all of files in a selected folder one time and then stop.
- All: Play back all of files in a selected folder repeatedly until stop.

iii. Photo Thumbnail View: Set up a display style of a photo(s) on the file list.

- No: List up a photo(s) file on file list.
- Yes: List up a photo(s) file with preview.

Photo Thumbnail View: "No"

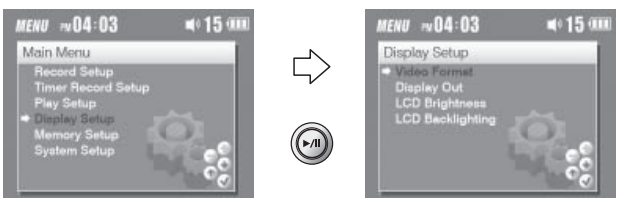
Image Thumbnail View: "Yes"

iv. Slide Show: Set up a photo(s) display style when selected a photo.

- No: display only selected photo.
- Yes: display all files sequentially in the selected folder by the slide show.

v. Slide Show Time: Set up an interval(1, 3, 5, 7, 10 sec) between a previous photo and the next photo in a slide show.

④ Display Setup



i. Video Format: Select a color encoding system. PDVR-1000 supports PAL or NTSC.

☞ The selection of PAL or NTSC in PDVR-100 is closely related to a pinhole camera type and an external display connection such as LCD and TV. If the color encoding system of PDVR-1000 is not accordance with a type of a camera thru AV-in or an external display device thru AV-out, there will be no signal on the LCD of PDVR-1000 or an external display device.

☞ How to set up PDVR-1000 according to camera type or External displayer.

PDVR-1000 setup	Camera type in AV-in	External displayer type in AV-out
NTSC	NTSC	NTSC
PAL	PAL	PAL

ii. Display out: Select an external display device thru AV-out to display what PDVR-1000 is previewing or recording.

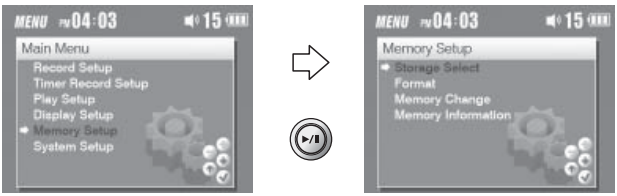
- LCD: Set up a LCD as an ext. display device.
- TV: Set up a TV as an ext. display device.

iii. LCD Brightness: Set up a level of LCD brightness(0-9).

☞ LCD brightness is related to the battery life, so set up it at low level as lower as a situation is allowed.

iv. LCD Backlight time: Set up a time of the LCD On. After a setup time (Off/3/5/10sec), LCD is off automatically if there is no key operation, but the LCD is back On if there is a key operation.

⑤ Memory Setup



i. Storage Select: Select the storage type to save a recorded or play a file(s).

- Internal: Built-in memory. - External: micro SD card.

☞ The capacity of internal memory can't be changeable and it may be different according to a model.

ii. Format: Select a memory storage to be formatted.

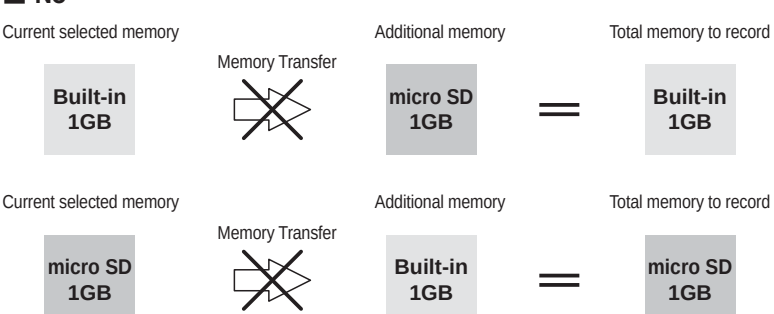
- Internal: Format a built-in memory. - External: Format a micro SD card.

☞ Before formatting a storage, make sure all contents in the storage are transferred to another storage or PC, or unnecessary contents anymore. All responsibilities for the contents are reserved by user.

iii. Memory Change: Set up whether continuously recording from the current selected memory to the other memory by transferring memory storage automatically or not when the current storage is full.

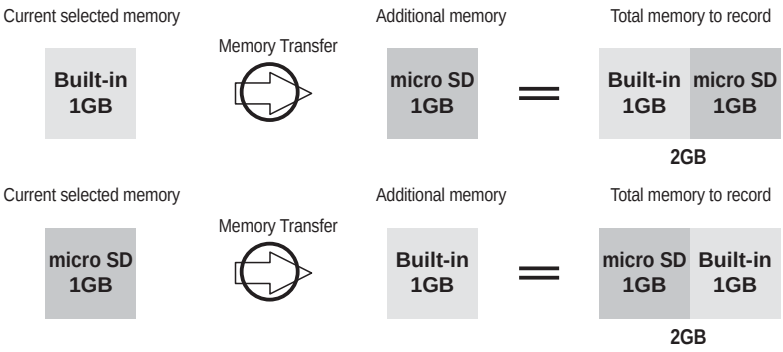
- No: Recording something as much as a capacity of a current selected storage is and then stop recording.

■ **No**



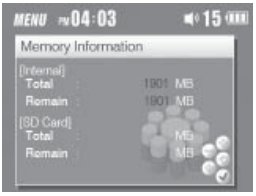
- Yes: Recording something continuously up to a capacity of the other storage after a current selected storage is full.

■ **Yes**



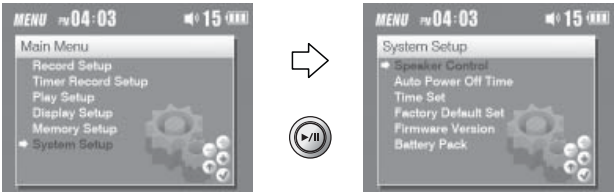
iv. Memory Information

User can check memory status of built-in memory(Internal memory) and External memory (micro SD card).



- Total: Full capacity of a memory.
- Remain: Remain capacity of a memory after using.

⑥ System Setup



i. Speaker Control: Control the Built-in speaker. (On/Off)
According to the setup, speaker icon on the LCD is changed.

- On: - Off:

☞ If plugging an earphone, speaker icon( ) is turned to a headphone icon( ).

ii. Auto Power Off Time: If there is no key or function operation for a setting time, automatically power it off. (Off/1/3/5/7/10min.)

iii. Time set: Set up the time & date and display way on the PDVR-1000.

- Date Set: YYYY-MM-DD(ex.09-05-25)
- Time Set: AM(or PM)Hour : Minute(ex.PM02:14)
- Date Display: Y/M/D(ex.2009-05-25) or M/D/Y(ex.05-25-09)
- Time Display: 12H(PM02:14) or 24H(18:18)

iv. Factory Default: Return all setup values to the initial values set up by the factory.

- No
- Yes

☞ Despite of returning all setting values to the factory default, there is no changes in the stored data and a current date & time.

v. Firmware Version: Checking the firmware version of PDVR-1000.

☞ Maker may release an up-to-date firmware if necessary to upgrade feature(s) or correct any trouble of PDVR-1000 without any notice in advance.

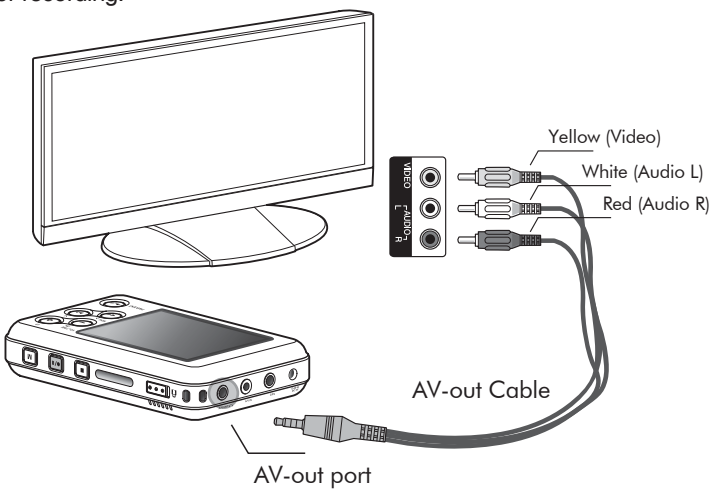
vi. Battery Pack

- On
- Off

When a battery pack is connected for additional power supply, this should be selected "On" for preventing abnormal operations from a low level of the battery pack power.

☞ If AC/DC adaptor is connected after the battery pack off, this value should be back to "Off".

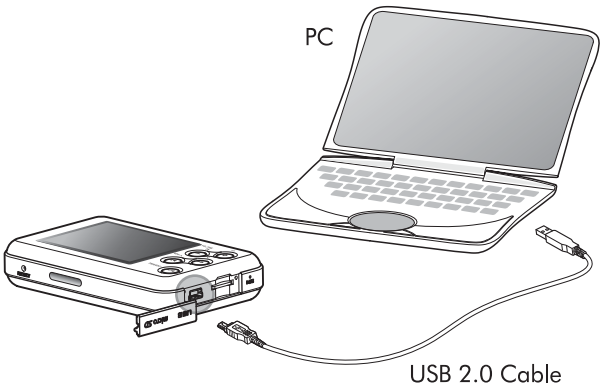
It supports to display on an external display device such as TV or LCD in playing, previewing or recording.



☞ TV or LCD shall be in same color encoding system(NTSC or PAL) as the setup of PDVR-1000.

08 Connecting to PC for downloading and uploading

Connect PDVR-1000 to PC thru the provided USB cable for downloading or uploading files and upgrading firmware.



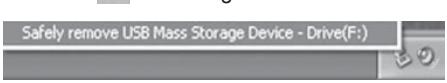
① Connect it to PC.

② Turn it on if PDVR-1000 is in power off.

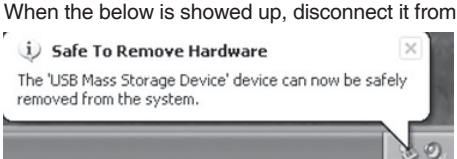
③ The below is displayed on the LCD of PDVR-1000.

④ If all tasks are done, disconnect it from the PC following the safe removal procedure.

⑤ Click the on the right bottom of the Window OS. If so, the below is displayed up.



⑥ When the below is showed up, disconnect it from the PC.



☞ No requiring any additional driver or S/W for connecting to PC.

☞ Whenever connecting PDVR-1000 to PC, the folder(F) to store KM-player is up. If it is not necessary to install to the PC, close this window.

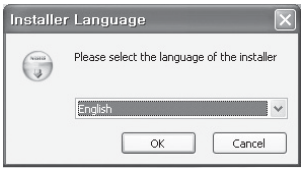
The recorded file(H.264) in PDVR-1000 is required to play back on the special application("KM Player").
Install it on a PC following the installation procedures of KM Player by clicking the file.

☞ It is not available to remove "KM-player" in PDVR-1000 after installation.
KM-player can be obtained on an indicated website, too.

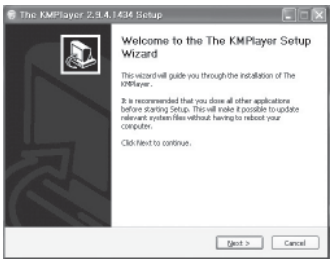
1. Installation of KM Player

① Click the file of KM player.exe in the folder of PDVR-1000

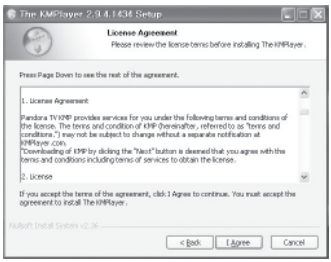
② Select language



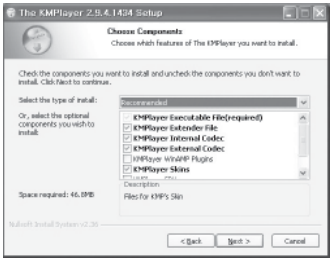
③ Run a KM player wizard and click "Next"



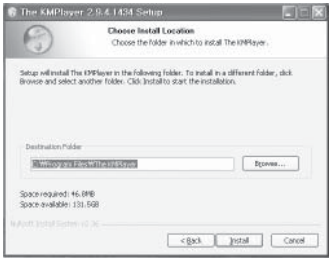
④ License agreement and Click "I agree"



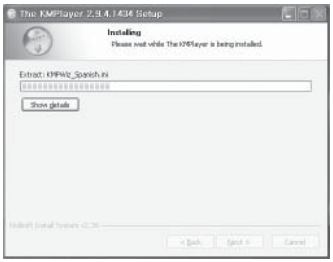
⑤ Choose component and choosing all is a default



⑥ Choose a location of installation



⑦ Installing



⑧ Complete the Installation

The KMPlayer 2.9.4.1434 Setup
Completing the The KMPlayer Setup Wizard
The KMPlayer has been installed on your computer.
Click Finish to close this wizard.
Run The KMPlayer
Visit the KMP site for the latest news, FAQs and support
< Back
Finish
Cancel

⑨ Run KM Plyer

2. Interface of KM player

① KM Player Logo

② Control Pannel

③ Playback control Pannel

Maker will release an up-to-date firmware for improving its quality, making more efficient or correcting any problem with PDVR-1000 without any notice in advance. Regularly visit the maker's website or local distributor's website.

1. How to upgrade a firmware

① Download the last firmware from an indicated website.

② Unzip the firmware if it is compressed.

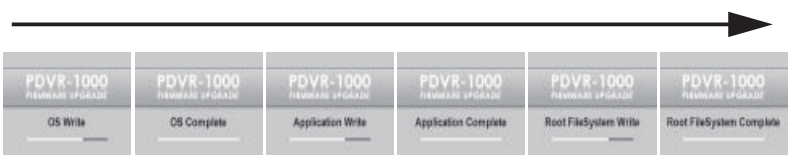
③ Connect it to PC with USB cable.(If PDVR-1000 is in power off, turn it on.)

④ If connecting is OK, the below folders are displayed on the top of the root directory.

⑤ Copy "upgrade" folder out of the unzipped firmware file and paste it to the root directory of PDVR-1000.

⑥ Disconnect PDVR-1000 from the PC and turn it off automatically, but if it may not turn it off automatically, try it off manually.

⑦ Turn it on once again. If so it starts the procedures of upgrade automatically as below and then turn it off automatically. It may take a little time.



⑧ Turn it on and check the firmware version.

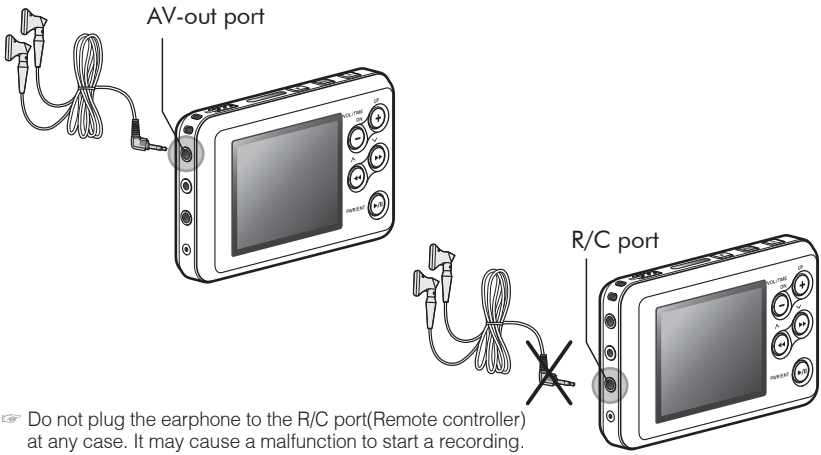
Setting -> System setup -> Firmware version.

☞ Strangly recommend to upgrade with connecting AC/DC Adaptor.
☞ Do not power off or press any key while upgrading. It may cause very serious problem to the unit.
☞ If upgrading is made, some setting values are back to the factory defaults, so it is required to set up once again if necessary.
☞ If there is a malfunction or hang-up, please reset by pressing rest hole on the bottom.

11 Application of Accessories

1. Earphone (Optional item)

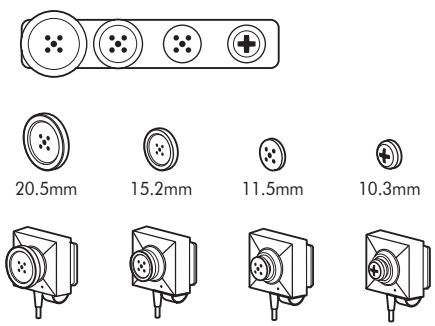
Earphone is used for monitoring what will be recorded while recording or previewing as well as it plays a file. In plugging the earphone, is changed to .



☞ Do not plug the earphone to the R/C port(Remote controller) at any case. It may cause a malfunction to start a recording.

2. Switchable camera button & screw

It is useful to attach the provided button or screw type adaptor to the front of camera lens when recording secretly.



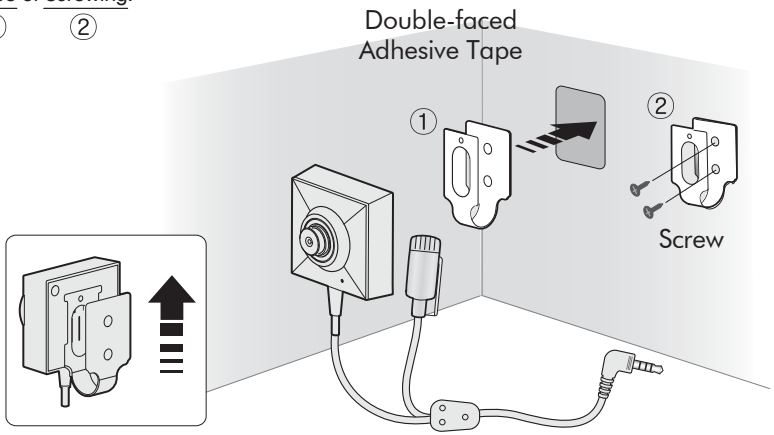
Additional normal buttons are also packed as a basic accessory, so if it is required to record in hiding the camera on a white shirt or a jacket, replace currently hung buttons on it with these buttons not to be recognized by others.

☞ If using this application, user makes sure if it is not in illegal before recording.
Maker or seller does not take any responsibility for any legal issue caused by this application.

3. Wall Bracket

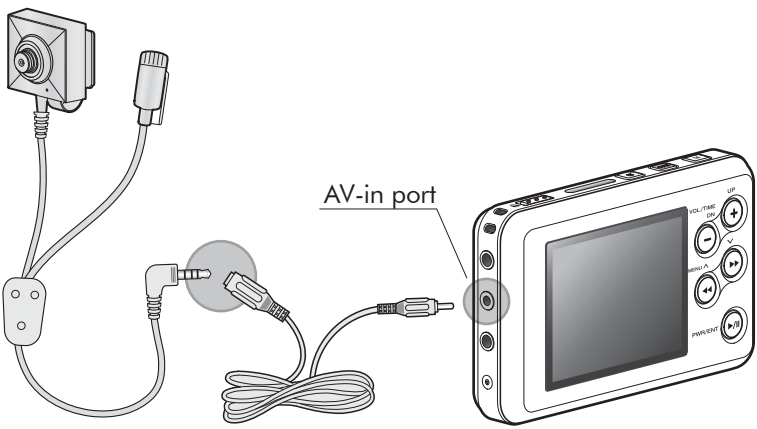
This is applicable for installing a camera on a wall or a board with double-faced adhesive tape or screwing.

① ②



4. Camera Extension cable (Optional item).

In case of installing a camera far from the PDVR-1000, it is recommendable item to extend the cable length longer.

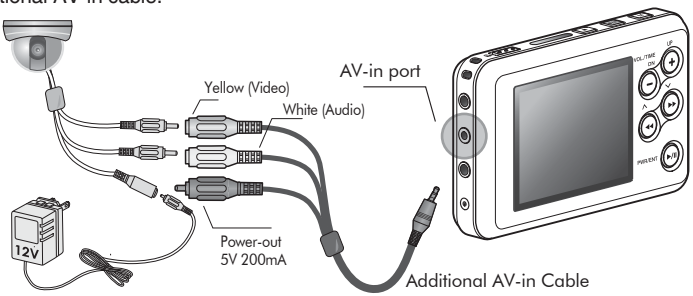


☞ When using the camera extension cable, there will be some decline of the recorded quality in voice recording, but video recording. Please keep in mind that the longer the cable is, the worse quality is in voice recording.

11 Application of Accessories

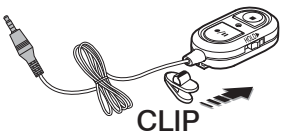
5. Additional AV-in Cable (Optional item).

When connecting the other camera with different connection jacks and power specification, use the additional AV-in cable.

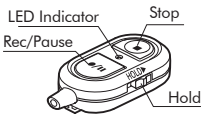


6. Wired Remote Controller (Optional Item).

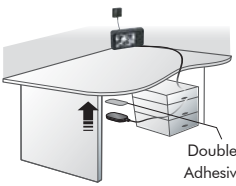
With the remote controller, to start, pause or stop a recording can be operated without operating PDVR-1000 directly.



The R/C can be clipped to the edge of the pocket to hold firmly by adding the clip to the R/C as the above diagram.



- Stop: Stop recording.
- Rec./Pause: Start or pause recording.
- Hold: Hold on/off of key operation.
- LED Indicator: indicating currently recording or pausing.
  (Red On: Recording/Red Off: Stop recording/Blinking: Pause recording)

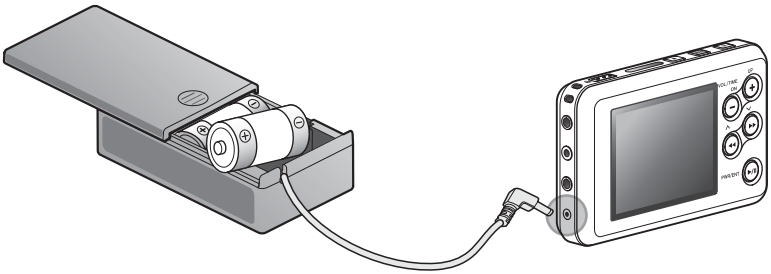


Attach the R/C under the table with a double-faced adhesive tape, so others can't recognize its operation.

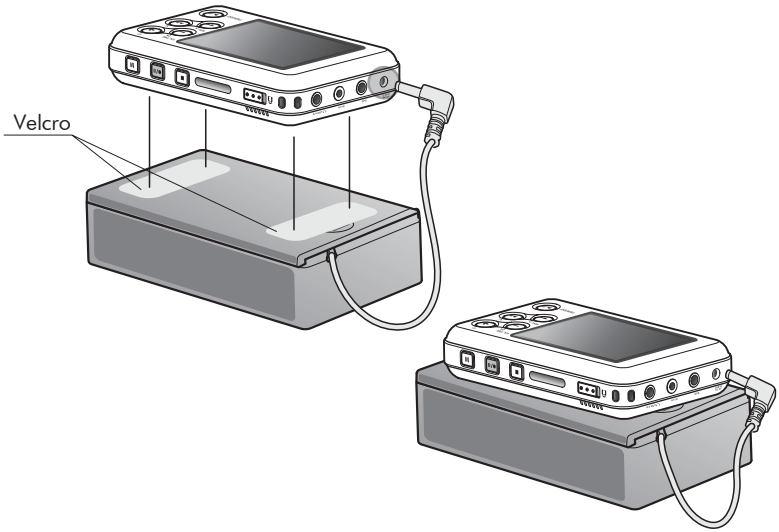
Operate PDVR-1000 by R/C in the pocket.

7. Extra Battery pack (Optional Item).

It makes an operating time longer lasting (approx.5hrs) with 3pcs of Alkaline UM-2(R14/1.5V).



Easy hand-carry by attaching(or detaching) the battery pack to(from) PDVR-1000 with Velcro as below.



☞ When a battery pack is connected for additional power supply, "Battery Pack" option in system setup should be selected "On" for preventing abnormal operations from a low level of the battery pack power.

☞ If AC/DC adaptor is connected after the battery pack off, "Battery Pack" option should be back to "Off".

12 General Specification

	SPEC		Detail & Support	Remark
H/W	Internal Storage Device		1-8GB	
	micro SD card (T-Flash)		1-16GB	Support SDHC 16GB
	LCD	Size	2.4"	
		Resolution	320x240, TFT 262K	
	Camera	Ext. Camera	1Ch (CCD type)	
	Video	Input Ch	1Ch (Support up to 720x480)	
		Output Ch	1Ch	TV/LCD Selectable
	Audio	Built-in MIC	YES	
		Input Ch	1Ch (Ext mic)	
		Output Ch	1Ch	
		Speaker	Mono	
	Remote Control		REC/STOP/PAUSE/HOLD	LED Display (REC: ON, PAUSE: Blinking)
	KEYS		HOLD	
			PLAY	
			MENU, REC, STOP	
			VOL UP, VOL DOWN	
			FF, REW	
	PC Interface	USB	USB 2.0 (High Speed)	
	Power	Battery	3.7[V], 2000[mAH]	Li-ion Polymer
		AC Adaptor	DC 5V, 2A	
Size	Dimensions		95.6x59.6x18.0[mm]	
	Weight		98.5[g]	
Other functions	Memory Change in Memory Full		YES	
	Time stamp		YES	
	Record Quality Select		YES	
	Slide Show		YES	
	LCD On/Off		YES	
	Video/Audio Select		YES	
	Image Thumbnail View		YES	Max View Size 1600x1200
	Support LCD Off to Recording		YES	
	Recording backup to low battery		YES	
	Auto Power Off		YES	
Recording	Video Recording	Video Format	NTSC/PAL	Video+Audio, Video
		Resolution	NTSC: 720x480/352x240/176x120	
			PAL: 720x576/352x288/176x144	
		Frame Rate	5/10/15/20/25/30fps	NTSC (PAL up to 25fps)
		Quality	High/Standard/Low	

Recording	Video Recording	Snap Picture	YES	
		Auto Timely Shot	YES	10/20/30/60 sec
	Audio Rec.	Voice Recoding	YES	
		Video & Audio Rec	YES	
	Motion Detection Rec.		YES	
	Timer Recording		YES	
	Recording Time	Normal Mode	Min 2hours30mins	Built-in Battery
Playback	Video	Resolution	720x480/352x240/176x120	720x576/352x288/176x144
		Frame Rate	Max. 30 fps with NTSC	Max. 25 fps with PAL
		File Format	H.264	
		Playback speed	1/8, 1/4, 1/2, 1, 2, 4, 8	
	Audio	File Format	WAV	
	Playback Time	Normal Mode	Min 4 hours	
	PC Player	KM Player	Stored in the folder of PDVR-1000	Internet Download available

Warranty Card

Product: Pocket Video Recorder
Model: PDVR-1000
Warranty Period: 6 months
Purchase Date:

Purchaser	Name	
	Address	
	Telephone	
Seller	Name	
	Address	
	Telephone	

- Please contact your retailer center of DIASONIC Technology Co., Ltd. When it is out of order.
- Exchange, (charged or free) repair services, refund, and part-keeping periods comply with regulations of the customer protection act.
- For questions or more information about the product, contact the customer center of DIASONIC Technology Co., Ltd
- The warranty card is only valid in the country to purchase. Please keep the card for a service.

Diasonic Technology Co., Ltd
Address: 321-43, Seoksu-dong, Manan-gu, Anyang-si, Gyeonggi-do (430-040), South Korea.

Reseller or distributor

MY SECURITY MASTER

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